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Artificial intelligence and its role in developing logos for the New Administrative Capital among art education students

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Abstract:

The research addresses a modern technological aspect focused on the challenges of the era, namely artificial intelligence and how it mimics the human mind. The researcher applied this study to art education students, asking them to create two logos for the New Administrative Capital. The first logo was designed by the student within a specified time (15 minutes), and the second was created using artificial intelligence programs, followed by a comparison between the two.

The research problem lies in how to benefit from the various artificial intelligence programs in designing multiple logos for art education students. Additionally, it explores how a logo for the New Administrative Capital can be designed using diverse inputs and various programs to produce designs with specific specifications. The significance of the research includes employing multiple artificial intelligence programs to produce various designs for the New Administrative Capital logo. Furthermore, it involves benefiting from the designs produced by artificial intelligence programs, which integrate diverse inputs to enrich the design field from a technological perspective. A comparative study was conducted between the students' manual designs and the designs produced by artificial intelligence programs for the same logo using modern technology.

The importance of the research is highlighted in several points: Adapting other sciences to serve the design field through the utilization of artificial intelligence programs. Investing in technology and rapid developments to produce an infinite number of designs for the New Administrative Capital logo. Translating written inputs into innovative and diverse artistic logo designs.

Through statistical studies, the research concluded that artificial intelligence is a time-saver by summarizing all that is required quickly in integrating symbols with linear writing. It was found that many logos could be derived using artificial intelligence programs, which were proven to have more artistic value than the designs created by students within a short time. The logos produced were balanced in shape, space, and proportions, as measured against the students' work. Colors were used creatively and ideally distributed in artificial intelligence compared to the students' work. Additionally, artificial intelligence programs can easily provide diverse linear writings useful for creating logos through simulation and analysis, unlike the student who is not familiar with all types of fonts and how to write with them. This greatly benefited the student in addressing deficiencies through artificial intelligence.

Statement of the Problem: Given the rapid developments and the multiplicity of artificial intelligence programs used and the necessity of synchronizing them with artistic thinking and the designs used, this research problem arose from the following questions: How can the multiple artificial intelligence programs be utilized in designing various logos for second-year students at the Faculty of Specific Education (Department of Art Education), Mansoura University, and compare them with logos made manually within a set time not exceeding 15 minutes? How can a logo for the New Administrative Capital be designed through diverse inputs and programs used to produce designs for this logo with specific specifications?

Research Objectives: To employ more than one artificial intelligence program in design to produce multiple designs for the New Administrative Capital logo. To benefit from the designs produced by artificial intelligence programs, which are a combination of diverse inputs into the program, enriching the design field from a technological perspective. To conduct a comparative study between the students' manual designs of the required logo and the designs produced by artificial intelligence programs for the same logo using modern technology.

Research Significance: To harness other sciences to serve the design field by utilizing artificial intelligence programs. To invest in technology and rapid developments to benefit from them in producing an infinite number of designs for the New Administrative Capital logo. To translate written inputs into innovative and diverse artistic logo designs.

Research Hypotheses: The research assumes that the study of logo designs produced (for the New

Administrative Capital) by artificial intelligence programs has more artistic value than the manual designs by students within the same set time. The research assumes that the designs produced by artificial intelligence programs for the New Administrative Capital logo use symbols more accurately than the students' manual designs of the logo within a (15-minute) time frame. The research assumes that the colors and writings in the innovative logo designs produced by artificial intelligence programs are of higher quality in color and writing precision.

Research Methodology: This research is based on the descriptive analytical method, which includes both theoretical and practical aspects. The descriptive analytical method in the theoretical part (analyzing some logos and describing them, as well as describing artificial intelligence programs, their types, their main features, and their disadvantages). The descriptive analytical method in the practical part (describing and analyzing students' artworks for designing logos of the New Administrative Capital produced using artificial intelligence applications). The quasi-experimental method in the practical side used to produce a special logo design for the New Administrative Capital by second-year students of the Faculty of Specific Education (Department of Art Education) at Mansoura University. The logo design here is done in two ways: manually and by using artificial intelligence programs by inputting some elements as text into the artificial intelligence programs and outputting them as logos suitable for the New Administrative Capital.

Results: After following the steps organized by the researcher leading to the final designs from artificial intelligence, the researcher concluded the following: Artificial intelligence saves time by summarizing all that is required, especially in creating the desired logo for the New Administrative Capital. This was clarified by the standard deviation in previous tables regarding the speed of completing the integration of symbols with linear writing in a brief time. The researcher concluded that the student is capable of creating an excellent logo, but it requires training, experimentation, and more time, in contrast to using artificial intelligence. The research resulted in the conclusion that many logos can be derived using artificial intelligence programs, which have been proven to have more artistic value than the designs made by students in a short time. The research concluded that artificial intelligence is capable of creating balanced logos in shape, space, and proportion, as measured against the students' work.The four programs used succeeded in accurately and creatively using symbols and overlaying them in a single shape, and it does not neglect the role of the human mind but needs more time. The researcher concluded that colors were used creatively and ideally distributed in artificial intelligence compared to students' work. The researcher understands that she put students in a problematic situation due to the limited time (a quarter of an hour) for creating the logo, which is a very short time for a student at this stage to produce a precise design within the set time. However, the research required this criterion for comparison. The current research concluded that artificial intelligence programs can easily provide diverse linear writings useful for creating the logo through simulation and analysis, unlike the student who is not familiar with all types of fonts and how to write with them. This greatly benefited the student in addressing deficiencies through artificial intelligence.

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